

IN THE CLAIMS:

Claims 6, 7 and 14 through 38 were previously cancelled. None of the claims have been amended herein. All of the pending claims are presented below for convenience of the Examiner.

1. (Previously presented) A method of removing halogenated materials from a halogen-containing environment, comprising:
introducing at least one gaseous aluminum compound selected from the group consisting of an alane, an alkylaluminum hydride, an alkylaluminum halide, an alkylaluminum sesquihalide, and an aluminum sesquihalide into a halogen-containing environment;
reacting the at least one gaseous aluminum compound with at least one halogenated material to form a gaseous reaction product; and
removing at least a portion of the gaseous reaction product from the environment.

2. (Previously presented) The method of claim 1, wherein introducing at least one gaseous aluminum compound selected from the group consisting of an alane, an alkylaluminum hydride, an alkylaluminum halide, an alkylaluminum sesquihalide, and an aluminum sesquihalide into a halogen-containing environment comprises introducing the at least one gaseous aluminum compound into an environment having at least one halogenated material adhered to at least one surface associated therewith.

3. (Previously presented) The method of claim 1, wherein introducing at least one gaseous aluminum compound selected from the group consisting of an alane, an alkylaluminum hydride, an alkylaluminum halide, an alkylaluminum sesquihalide, and an aluminum sesquihalide into a halogen-containing environment comprises introducing the at least one gaseous aluminum compound into an environment having the at least one halogenated material contained therewithin.

4. (Previously presented) The method of claim 1, wherein introducing at least one gaseous aluminum compound selected from the group consisting of an alane, an alkylaluminum hydride, an alkylaluminum halide, an alkylaluminum sesquihalide, and an aluminum sesquihalide into a halogen-containing environment comprises pulsing the at least one gaseous aluminum compound into the halogen-containing environment.

5. (Previously presented) The method of claim 1, wherein introducing at least one gaseous aluminum compound selected from the group consisting of an alane, an alkylaluminum hydride, an alkylaluminum halide, an alkylaluminum sesquihalide, and an aluminum sesquihalide into a halogen-containing environment comprises introducing the at least one gaseous aluminum compound into the halogen-containing environment in an amount sufficient to react with the at least one halogenated material.

6. (Cancelled)

7. (Cancelled)

8. (Previously presented) The method of claim 1, wherein introducing at least one gaseous aluminum compound selected from the group consisting of an alane, an alkylaluminum hydride, an alkylaluminum halide, an alkylaluminum sesquihalide, and an aluminum sesquihalide into a halogen-containing environment comprises introducing dimethylethylamine alane or trimethylamine alane into the halogen-containing environment.

9. (Previously presented) The method of claim 1, wherein introducing at least one gaseous aluminum compound selected from the group consisting of an alane, an alkylaluminum hydride, an alkylaluminum halide, an alkylaluminum sesquihalide, and an aluminum sesquihalide into a halogen-containing environment comprises introducing at least one organic aluminum compound selected from the group consisting of dimethyl aluminum hydride, diethyl aluminum hydride, and methyl ethyl aluminum hydride into the halogen-containing environment.

10. (Previously presented) The method of claim 1, wherein introducing at least one gaseous aluminum compound selected from the group consisting of an alane, an alkylaluminum hydride, an alkylaluminum halide, an alkylaluminum sesquihalide, and an aluminum sesquihalide into a halogen-containing environment comprises introducing the at least one gaseous aluminum compound into a deposition chamber contaminated with the at least one halogenated material.

11. (Original) The method of claim 1, wherein reacting the at least one gaseous aluminum compound with at least one halogenated material to form a gaseous reaction product comprises reacting the at least one gaseous aluminum compound with the at least one halogenated material to form an aluminum halide compound.

12. (Previously presented) The method of claim 1, wherein reacting the at least one gaseous aluminum compound with at least one halogenated material comprises reacting the at least one gaseous aluminum compound with at least one of NF₃, SF₆, C₂F₄, chlorine, and ClF₃.

13. (Original) The method of claim 1, wherein removing at least a portion of the gaseous reaction product from the environment comprises venting the environment or applying a vacuum to the environment.

14.-38. (Cancelled)